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AUTHOR Dubocq, Edward R.
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ABSTRACT

A course in sculpturing wooden forms is presented. It has a two-fold purpose: (1) to create in the student an awareness of the effect sculptural forms have on his environment, (2) to further enhance the artistic abilities of the student through sculpting in wood. Content of the course includes a demonstration of wood sculpture techniques and an introduction to the materials of sculpting. (CK)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE



Art Education: SCULPTURE: WOOD FORMS 6683.13

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SCULPTURE: WOODEN FORMS

ART: 6683.13

ART EDUCATION

Written by Edward R. Dubocq

for the

DIVISION OF INSTRUCTION
Dade County Public Schools
Miami, Florida
1971

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I. COURSE TITLE

SCULPTURE: WOODEN FORMS

II. COURSE NUMBER

6683.13

III. RATIONALE

Sculpture--"plastic, or hard materials that have been welded, engraved, carved, molded, or constructed into a primarily three dimensional work of art."

We are constantly surrounded by varying forms of sculpture in our natural environment. "Sculpture: can entail any three dimensional form around us, from a tree to a building. Sculpture, in one way or another affects every day of our lives; be it through an object that is simply pleasing to the eye, or the pure functionality of a unit of sculptured steel, the modern automobile.

This course in wood sculpture has been created with a three-fold purpose: first, to create in the student an awareness of the effect sculptural forms have on his environment; secondly, to further enhance the artistic abilities of the student through sculpting in wood.

IV. COURSE DESCRIPTION

A. Elective, grades 7-12, exploratory

B. Textbooks and other materials:

Text materials, visuals, vocabulary lists, etc., may be selected from examples provide in parts IX and X of this Quinmester Course of study, at the instructor's discretion. It is suggested that references marked with an asterisk be kept on hand for student use in the classroom.

C. Vocational Scheme:

To prepare the student for more advanced techniques and courses in the area of sculptural art.

D. Method: (by week)

1. Weeks 1 and 2: Lecture and demonstrations

2. Weeks 3 to 9: Studio procedure

a. Critique at the end of each week

b. Additional movies, lectures, etc., at instructor's discretion

E. Synopsis:

NOTE: There are suggested presentation outlines for each of the sub-headings in this section. They are located in part VIII.

Introduction

1. Wood sculpture appreciation (movie on the history and appreciation of wood sculpture to be presented).

2. Techniques in wood sculpture

- a. Direct carving technique
- b. Joining wood
- c. Surface treatment
- d. Polishing and waxing
- e. Base design and creation

3. Critique

V. ENROLLMENT GUIDELINES

- A. Prior courses: None
- B. Evaluative device: Empirical testing, weekly critique, final critique of student work
- C. Concurrent programs: None

VI. BEHAVIORAL OBJECTIVES

- A. Competencies expected upon completion of this course

The student will be able to

- 1. List correctly the procedures for the following wood sculpting techniques:
 - a. Direct carving
 - b. Joining wood
 - c. Surface treatment
 - d. Polishing and waxing
 - e. Base design and creation
- 2. Define related vocabulary terms as listed in part VIII of this course outline.

3. Identify four wood sculptors from past and/or contemporary art movements.
 4. Given the necessary tools, equipment, directions relating to their care, operation and use, to perform the assigned task in wood sculpturing according to the directions and specifications of the tools and materials which are utilized in the operation of the task.
 5. Describe the correct procedures for working in a wood sculpture studio.
 6. Create open and/or closed forms in wood.
 7. Given an assignment to create a form, to critique one sculpture, using the direct carving method.
(Sculpture is to include a base.)
 8. List the correct procedures for joining wood.
 9. List the various types of surface treatment that may be used on wood sculpture (as listed in part VIII of this course outline.)
 10. List the correct method for waxing and polishing wood (as listed in part VIII of this course outline.)
 11. List the correct procedures for base design and creation for a wood sculpture.
- B. The student will demonstrate competencies under the following conditions:
1. Classroom discussion

2. Individual research
 3. Individual studio procedure
 4. Group critique
 5. Empirical testing
- C. Acceptable performance will be determined by the individual instructor on the basis of required projects turned in for grade, and empirical testing.

VII. COURSE CONTENT

A. Introduction

1. Sculptural appreciation movie
2. Sculptural history movie
3. Vocabulary list--presentation and discussion
4. Class resources
5. Work sheets
6. Tools and materials
7. Studio procedures
 - a. Care of studio materials
 - b. Proper storage of studio material

B. Demonstration of wood sculpture techniques

1. Direct carving
2. Joining wood
3. Surface treatment
4. Polishing and waxing
5. Base design

- C. Studio work
- D. Student and teacher critique
- E. Preparation of studio

VIII. COURSE PROCEDURES, STRATEGIES, AND SUGGESTED LEARNING ACTIVITIES

A. Vocabulary List*

Instructor may use definitions provided, or have students research definitions as an assignment.

1. Bench clamp: A large clamp used to hold a piece of wood to be carved securely to the bench.
2. Chisel: A sharp edged tool, available in various sizes and shapes, used primarily for carving flat surfaces on wood.
3. Closed form: A form which is solid in appearance, having no holes or cavities; a form that encloses space.
4. Direct carving: A process by which a subject is sculptured from a solid piece of wood by cutting in from the surface.
5. Gouge: A chisel having a U-shaped edge, used primarily for creating curved areas in a wood sculpture.
6. Gouge slip: A cylindrical, or cone shaped sharpening stone used to sharpen gouges.

*Definitions, in some instances, composed with the aid of American College Dictionary, Random House, 1967 edition.

7. Mallet: A wooden instrument, similar to a hammer in purpose, only having a cylindrical head--used in striking a chisel.
8. Media: Any substance used in the construction of wood sculpture.
9. Open form: A form containing hollow areas, cavities, or holes (as opposed to closed form).
10. Rasp: A coarse-toothed file used for scraping wood from a block.
11. Riffler file: A file similar to a rasp, only having a smaller working area; used primarily for scraping wood in places where a rasp cannot reach.
12. Sculpture: Plastic or hard materials that have been welded, carved, engraved, molded, or constructed into a primarily three dimensional work of art.
13. Sculptor: One who sculpts, or creates sculpture.
14. Studio: Any area designated for, or in which artistic creation takes place.
15. Texture: The structure of the surface of any work of art.
16. Tooling: To carve, or "work" the surface of a wood sculpture.

B. Procedure:

1. General sculpture information

The primary guideline applying to all forms of sculpture is good three-dimensional design. In sculpture,

one must relate his design to a free standing form that will be viewed from all sides. One should keep this fact in mind when designing his sketches or models. If a sculpture has been well designed, it will be pleasing to the eye from any angle.

As in painting or collage, the design should be developed through a series of thumbnail sketches, or clay models. Develop an idea of what you want your sculpture to look like before you actually begin to carve. By doing this series of quick "shape" or "form" models, one will discover certain forms that appeal to his desired style. In some cases, the rough block of wood will suggest certain forms in itself.

Another item to consider is the base or stand that will be designed to support the sculpture. It is easy to make the mistake of designing a base that detracts from the visual impact of the sculpture. When a base is connected, it becomes a part of the sculpture, it should relate to the sculpture and yet be subtle in its relationship.

Finally, in creating a sculpture, try to have the finished piece show "movement". A piece of sculpture that appears to show "movement" or "action" has a much greater and more pleasing visual impact than one that that appears to be stagnant or unmoving.

There are more specific steps in the creation of wood sculpture. They are listed on the work sheets included in this Course of Study.

2. Supplies and materials needed:

Wood (See Hints for Instructors)

Carving tools (See Hints for Instructors)

Sandpaper (No. 1 to 00 grit)

Clean rags

Hotplate

Water

Small, soft brushes

C clamps

Glue (croid, scotch, or epoxy)

Bees wax

Assorted files and rasps

Metal tin

Saucepan

Turpentine

Butchers wax

Fine steel wool

Dull lacquer

Sandbags, oil drums, bench clamps, bench screws, etc.

C. Studio procedure for students

(This list may be duplicated and distributed to individual students.)

1. Students will at all times be expected to come to class with required materials and be expected to work.
2. At the beginning of each period students will enter class and remain quietly in their seats until roll has been taken and all announcements have been made by the instructor.
3. Each student will be assigned an individual work and storage area which he or she will be responsible for.
4. Carving tools will be distributed on a sign out basis. Students will be expected to demonstrate correct care for an use of carving tools.
5. At no time will any student be allowed to use, touch, or move another student's project or materials.
6. Monitors will be assigned by the instructor to supervise certain areas.
7. All students will be expected to stop working and begin clean-up promptly, five minutes before the end of each period.
8. At all times students will be expected to maintain a "professional" attitude towards their work, supplies, and fellow artists.

D. Hints for Instructors

1. There are many visual aids available. Plan the ordering of movies, slides, and other visuals well in advance.
2. Design the studio so that there is a specific area to store all supplies. This makes for an excellent way of getting a quick check of materials at the end of each period.
3. Assign monitor positions for checking of tools, and supplies.
4. If tools are at a premium, have students sign them out.
5. Have a monitor sweep the studio at the end of each period.
6. Fifty gallon oil drums make excellent work benches for students.
7. Prepare one foot square sandbags made of canvas for students. They make for good supports while the sculpture is being carved.
8. Make regular periodic checks of students carving tools for sharpness. A dull carving tool will make carving difficult and slow the students progress.
9. It is suggested that each student be given one of each of the following tools for carving. (If your supply budget is not adequate, up to three students may share one set of tools.)
 - a. Chisels (flat)
 - (1) 1 inch
 - (2) 1/2 inch

b. Gouges

- (1) #9 - 1/4 inch
- (2) #6 - 1/2 inch
- (3) #9 - 1/2 inch
- (4) #7 - 3/4 inch

c. Circular wood mallet

The following tools should be supplied at the rate of one tool per five students.

d. Sharpening Stones

- (1) Oilstone
- (2) India slip
- (3) Various smaller slips
- (4) Oil

10. Wood comes in many varieties: hard, soft, light, dark, and in almost any combination of those just mentioned.

The best type of wood for a novice in wood sculpture to select is one that is neither too hard, or too soft. It should be free of knots, cracks, and, most importantly, be well seasoned. You may have difficulty in finding seasoned wood. Unless you have been able to create a stockpile of your own aged wood, the best thing to do would be to check with local lumber dealers for supplies of old wood.

E. Work Sheets

NOTE: The following suggested work sheets have been designed as aids for the individual students. They may be duplicated and distributed to the students for reference, following the instructor's demonstrations.

WORK SHEET--WOOD SCULPTURE

Direct Carving

A. Materials:

1. Set of carving tools
2. Wood to be carved
3. Work area including bench clamp or sandbag

B. Procedure:

In this course, we will be concerned with "Sculpture in the Round," that is, a free standing sculpture which may be viewed from all sides.

1. Read the work sheet on surface treatment.
2. Prepare several sketches of views from different sides of the proposed sculpture, or create a small working model from clay.
3. Brace the piece of wood you have selected securely to the work bench with either a bench clamp or bench screw.
4. Begin to carve, making your cutting strokes across the grain of the wood. Remove only small chips of wood with each stroke.
5. Work slowly, sculpturing gradually from all sides, working towards the finished piece in the center.
6. Step back frequently, viewing the sculptural progress from all sides, constantly checking for correct form and proportion.
7. Once you have achieved the desired shape, you may refer

to the work sheet on surface treatment and continue from there.

C. Suggestions:

1. Be sure your design is satisfactory before you begin to carve. Observe the piece of rough wood closely. Some pieces of natural wood suggest forms from within.
2. Work gradually. Rushing will only cause unwanted mistakes. Remember, once a piece of wood has been chipped away, it cannot be replaced.
3. Work in the round. Be sure to carve from all sides, observing the whole form take shape. Watch your proportion.
4. If in doubt at any time--check with your instructor.
Better to be safe than sorry

WORK SHEET--WOOD SCULPTURE

Joining Wood

A. Materials:

- | | |
|----------------|---|
| 1. Hot plate | *6. Glue (Croid, scotch or contact type) |
| 2. Hot water | *7. Beeswax |
| 3. Small brush | *8. Wood pieces |
| 4. Clean rags | |
| 5. Wood clamps | *Indicates items to be supplied by students |

B. Procedure:

Wood joining may be required in instances when the size of the sculpture makes it difficult to obtain a solid piece.

1. Plane the pieces to be sure there is no warp in the surfaces to be joined.
2. Before joining, line up the pieces so that when they are joined, the grains will run in the same direction.
3. Always select a good quality wood glue.
 - a. If it is a new resin or epoxy-type glue, follow the directions on the container carefully, using the least amount of glue required.
 - b. For Croid, or Scotch glue:
 - (1) Heat the glue on the hotplate.
 - (2) Wet both surfaces to be joined with hot water, (this will swell the grain, allowing for better adhesion).

- (3) Apply the glue with a small brush, and clamp together.
- (4) Wipe off excess glue at the seams with a damp cloth.
- (5) Allow to set overnight.

4. Cracks:

Cracks may later appear as the wood is carved. In most instances these cracks will close up by themselves, if not, fill the cracks with softened beeswax.

WORK SHEET--WOOD SCULPTURE

Surface Treatment

A. Materials:

1. Carving tools
2. Sandpaper (No. 1 to 00 grit)
3. Files (fine bastard-toothed, and riffler)
4. Soft brush
5. Clean rags

B. Procedure:

There are two basic types of surface treatment. One is a rough, tooled surface; the other, rubbed and polished.

A well-rubbed, highly polished surface will bring out the grain patterns and various hues of the wood. This process is most effective on hard woods, such as mahogany or ebony.

A tooled surface is also a thing of beauty. No two artists will carve a piece of wood alike. Each sculptor's tool marks act almost as a signature does on a painting, identifying the artist with the work.

Perhaps the best way to decide which treatment is the most dramatic, is to try to match the surface treatment with the style of the sculpture. The final selection is up to the individual. In this work sheet, we will discuss both the tooled and the rubbed surface techniques.

1. Tooled surface treatment

A tooled surface treatment is simply one in which the artist does not polish the surface. It is left in a rough state, clearly showing the actual chisel marks in the surface of the wood. This rough, highly textured surface works well with many different woods and sculptural subjects.

2. Polished surface preparation

- a. Once you have tooled the sculpture to the smoothest possible surface with a chisel, go over the piece with a fine bastard-toothed file. (Areas that cannot be reached may be filed with various riffler files.)
- b. Rub down the entire sculpture with No. 1 sandpaper--sanding until smooth.
- c. Repeat the process, using finer grained sandpaper, until 00 grain is used.
- d. Brush clean and wipe off with a soft rag.
- e. You are now ready to go on to the polishing stages
(See work sheet entitled "Polishing and Waxing").

WORK SHEET--WOOD SCULPTURE

Polishing and Waxing

A. Materials:

Beeswax Polishing

1. Metal tin
2. Hotplate
3. Saucepan
4. Beeswax
5. Cloth
6. Turpentine
7. Butchers Wax

Lacquer Coating

1. Dull lacquer
2. Fine steel wool
3. Soft brush

B. Procedure:

The freshly carved appearance in a piece of wood sculpture may best be preserved by polishing. (Certain woods, such as mahogany may be allowed to age and darken before polishing.)

There are many types of finishes that may be applied to wood.

In this work sheet we shall discuss two such types:

1. Beeswax polishing (for hard woods)

- a. Cut several pieces of beeswax and place them in a metal tin.
- b. Cover the pieces with turpentine.
- c. Float the metal tin in a saucepan of water.
- d. Heat the water on a hotplate (being careful not to ignite the turpentine) until the wax is melted and mixed with the turpentine.

- e. Allow mixture to cool.
 - f. Apply a thin coat of wax to the sculpture with a piece of cloth.
 - g. Using another clean piece of cloth rub the wax to a high polish.
2. Lacquer coating (for soft or light woods)
- a. Using a soft brush, flow on a coat of lacquer as evenly as possible.
 - b. Allow to dry overnight.
 - c. Polish lightly with fine steel wool.
 - d. Repeat the process.
 - e. If the wood still does not have enough luster to satisfy the artist, apply one coat of Butchers Wax and polish to a high gloss.

WORK SHEET--WOOD SCULPTURE

Base Design and Creation

Most sculpture is created either free standing, or with a base that is a part of the sculpture itself, having been carved from the same piece of wood.

In some instances, however, a piece of sculpture may be designed to be mounted on a separate base. If your sculpture is of this type, here are some guidelines to follow in the design and creation of a suitable base.

A. Design:

A base should be designed to complement the sculpture. The design for the base should be simple and direct. Keep in mind that the base must not detract from the visual impact of the actual sculptural design.

Some sculptors have a base in mind when they are still carving the sculpture. However, the artist must remember that the base is designed to fit the sculpture, not the other way around.

Simplicity is the key word in your design.

B. Compatibility:

The next step in creating your base is to select the material from which it will be made. There are many substances to choose from. Some are stone, wood and metal.

Basically, it is up to the individual artist as to which material he should select for a base. As you have already

created a simple, direct design, you should now concern yourself with color. For example, a metal base may be spray painted any color desired, to complement the sculpture, but natural stone has its own color and may not work well with some types of wood. Select a base material that is compatible with your sculpture.

C. Texture:

As the individual artist desires, he may select a texture for the base that is anywhere from rough to highly polished. The artist must remember that the base is designed as a support for the sculpture and therefore must complement it. It is for this reason that some combinations generally do not work well, such as a rough sculpture with a highly polished base of the same wood.

As you can see, there are many variables involved in the design and creation of a good base. Experiment with several designs and substances. Just keep in mind the primary guidelines:

1. Simplicity of design
2. Compatibility of media
3. Compatibility of texture

D. Mounting:

There are two basic ways of mounting a sculpture:

1. Attaching the sculpture directly to the base with an epoxy type to glue.
2. Mounting the sculpture in a raised position from the base. This is done by drilling holes into the sculpture and the base, then inserting wood, or metal dowels, thereby elevating the sculpture.

IX. RESOURCES FOR PUPILS

Baldwin, John, Contemporary Sculpture Techniques. Reinhold, 1967.

*Clarke, Geoffrey, A Sculptors Manual. Reinhold, 1968.

Craven, Wayne, Sculpture in America. Crowell, 1968.

Durst, Alan, Wood Carving. The Studio Ltd., 1946.

Mills, John W., The Technique of Sculpture. Reinhold, 1967.

*Reed, Sir Herbert Edward, History of Modern Sculpture. Praeger, 1964.

Struppeck, Jules, The Creation of Sculpture. Holt, 1952.

Weiss, Harvey, Clay, Wood and Wire. Scott, 1956.

*Texts should be kept on hand in the classroom for students use.

X. RESOURCES FOR INSTRUCTORS

NOTE: Resources marked with an asterisk have been selected during previewing as those most effective.

A. Movies, films (Available through Dade Co. B.P.I.--Instructional Materials Division)

* <u>19th Century Sculpture</u>	C	JST	5-20158
* <u>20th Century Sculpture</u>	C	JST	1-20159
* <u>Making Wood Sculpture with Files</u> Three Rivers 1-11649		13'C	EJ
* <u>Sculptor Carves a Giant, The</u> Three Rivers 1-11650		16'C	JS

B. Textbooks

*Clarke, Geoffrey, A Sculptors Manual. Reinhold, 1968.

*Reed, Sir Herbert Edward, History of Modern Sculpture. Praeger, 1964.

Reed, Sir Herbert Edward, Form, Space and Vision. Graham Collier, 1967. (State adopted text)

Rood, John, Sculpture in Wood. University of Minnesota Press, 1950.